Marked-Up Version of Claim Amendments

119 (Amended) A recombinant or synthetic polynucleotide encoding a protein that comprises each of the following structures:

a) Trp-R^1-X_7-R^1-R^1-R^2-X-Phe-Phe-Tyr-X-Thr-Glu-X_{8-9}-R^3-R^3-Arg-R^4-X_2-Trp **[Trp-R1-X7-R1-R1-R2-X-Phe-Phe-Tyr-X-Thr-Glu-X8-9-R3-R3-Arg-R4-X2-Trp]**

b) X_3-Arg-X_2-Pro-Lys-X_3 **[X3-Arg-X2-Pro-Lys-X3]**

c) X-Arg-X-Ile-X

d) X_4-Phe-X_3-Asp-X_4-Tyr-Asp-X_2 **[X4-Phe-X3-Asp-X4-Tyr-Asp-X2]**

e) Tyr-X_4-Gly-X_2-Gln-Gly-X_3-Ser-X_8 **[Tyr-X4-Gly-X2-Gln-Gly-X3-Ser-X8]**

f) X_6-Asp-Asp-X-Leu-X_3 **[X6-Asp-Asp-X-Leu-X3]**

wherein R^1 **[R1]** is Leu or Ile; R^2 **[R2]** is Gln or Arg; R^3 **[R3]** is Phe or Tyr; R^4 **[R4]** is Lys or His, and X_n **[Xn]** represents the number n of consecutive unspecified amino acids;

and wherein the protein has telomerase catalytic activity when complexed with a telomerase RNA component.

120 (Amended) The polynucleotide of claim 119, encoding a protein that comprises the structure Trp-Leu-X-Tyr-X_2-h-h-X-h-h-X-p-Phe-Phe-Tyr-X-Thr-Glu-X-p-X_3-p-X_3-Tyr-X-Arg-Lys-X_2-Trp **[Trp-Leu-X-Tyr-X2-h-h-X-h-h-X-p-Phe-Phe-Tyr-X-Thr-Glu-X-p-X3-p-X3-Tyr-X-Arg-Lys-X2-Trp]**; wherein h is a hydrophobic amino acid selected from Ala, Leu, Ile, Val, Pro, Phe, Trp, and Met; and p is a polar amino acid selected from Gly, Ser, Thr, Tyr, Cys, Asn and Gln.

121 (Amended) The polynucleotide of claim 119, where structure a) further comprises Arg-Lys-X_2-Trp-X_2-Leu **[Arg-Lys-X2-Trp-X2-Leu]**.